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## Notes on African and Asiatic Macrocephalinae (Hemiptera, Phymatidae)

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The present study of the African and Asiatic Macrocephalinae includes descriptions of one new genus and four new species, as well as additional data on previously described species.

The Phymatidae are distributed in the temperate and warmer parts of the world, with the exception of Australia, New Zealand, and the Pacific islands. The family has now four subfamilies: the Themonocorinae, Phymatinae, Carcinocorinae, and Macrocephalinae. The most primitive subfamily, the Themonocorinae, is restricted to Central Africa. It has one genus and three species. The Phymatinae extend much farther to the north and to the south than does any other subfamily. They are distributed in the New World from southern Canada to the St. George Gulf in Patagonia. In the Old World they are found around the Mediterranean Sea and throughout Europe, except Great Britain and Scandinavia, as far north as the Gulf of Finland. In Asia their distribution is sporadic, and they are known from Russian Turkestan, Manchuria, southern Sakhalin, and Shantung. This subfamily has four genera and about 90 species in the New World but only three species in the Old World. The subfamily Carcinocorinae is distributed in south and southeast Asia, from India to the Philippines, and had, until the publication of the present paper, three genera with 15 species.

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The Macrocephalinae have the widest distribution, being found in tropical and subtropical America, the Ethiopian Region of Africa, and tropical and subtropical Asia from Iran to the Philippines. Two, and probably three, genera are represented in the New World, with 52 species. In Africa there are three genera, with five species; in Asia, five genera, with 36 species. Most of the New World species of Macrocephalinae, as well as the Asiatic species, are sparsely represented in collections. The African species are rarest of all, often being represented by single specimens.

For the privilege of studying a small but very interesting lot of Old World Phymatidae from the collections of their respective museums, I wish to thank Drs. Jerome G. Rozen, Jr., and Herbert Ruckes, of the American Museum of Natural History, and Drs. J. F. Gates Clarke and Carl J. Drake, of the United States National Museum.

During this study, measurements were taken with a micromillimetric eyepiece, 20 units equaling 1 mm. In the ratios the first figure given in units represents the length, the second the width, of the measured part. The length of the head was taken on the median line from the tip of juga to the middle of the posterior border of the head; the length of both the pronotum and scutellum was measured along the median line; the abdomen was measured along the ventral side on the median line from the anterior border of sternum II to the tip of the abdomen. The width of the head was measured through the eyes; the width of the pronotum, scutellum, and abdomen was taken as the maximal width. If the fore lobe of the pronotum was distinctly separated from the hind lobe, the width of the former was taken at the base of it and is given in parentheses after the length and before the maximal width. If the scutellum was constricted near the base, the minimal width is indicated in parentheses after the length, and before the maximal width. In the proportions of antennal segments the figures are given from I to IV, representing the length of the segment; the maximal width of the segment, taken as viewed from above, is given in parentheses after the length.

#### SUBFAMILY MACROCEPHALINAE

##### *OXYTHYREUS* WESTWOOD

*Macrocephalus (Oxythyreus)* WESTWOOD, 1843, Trans. Ent. Soc. London, vol. 3, p. 27. Haplotype: *M. (O.) cylindricornis* Westwood, 1843.

*Oxythyreus* HANDLIRSCH, 1897, Ann. Naturhist. Hofmus., Vienna, vol. 12, pp. 143, 207.

*Oxythyreus* MAA AND LIN, 1956, Quart. Jour. Taiwan Mus., vol. 9, pp. 118, 124.

Formerly this genus had only one species, *Oxythyreus cylindricornis*

Westwood, 1843, with unknown locality. Below is a description of the second species, from South Africa.

***Oxythyreus ruckesi*, new species**

Figures 1-7

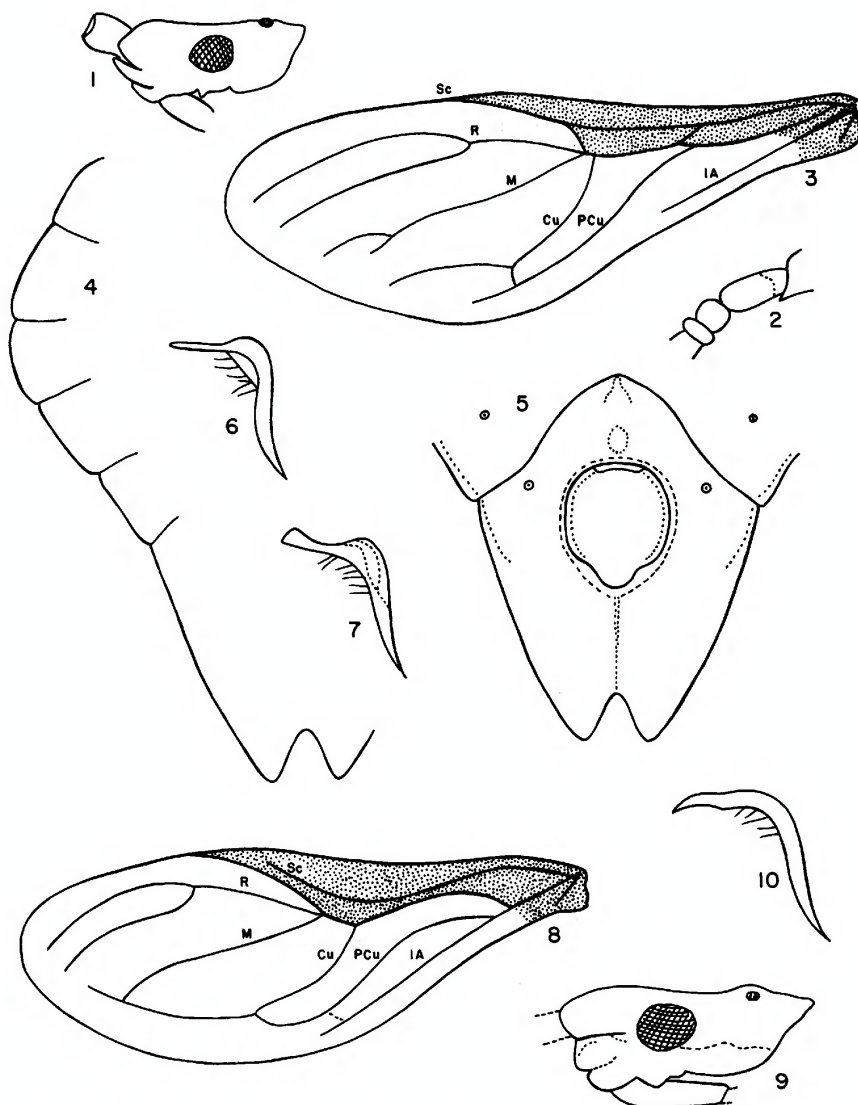
MALE: Body almost fusiform, with cordate abdomen; head, first three segments of antennae, fore lobe of pronotum, pleura, connexivum from above, whole venter, acetabula, and coxae granulate (femora with semi-obliterate granulation). Hind lobe of pronotum roughly punctate; scutellum and corium of hemelytra finely punctate.

Head twice as long as wide through eyes (40/20); preocular part of head as long as postocular (14/14); eyes rather flat, feebly convex; ocelli dorsolateral, equidistant from eyes and hind border of head. Upper surface of head granulate; tylus with fine row of granules; juga enveloping first antennal segment from side and from below; genae slightly shorter than juga. Antennae with first segment cylindrical, obliquely truncate apically; second segment globose, almost as long as wide; third button-shaped, half as long as wide; fourth missing. Proportions of antennal segments: 13(8)/6(6.5)/3.5(7.3). Rostrum strong; segments slightly tapering toward their apices; proportions of rostral segments 1 to 3 (visibles): 21(9)/11(7)/7.5(2.5).

Pronotum shorter than wide across humeri (60/81); front border widely and roundly excavated; anterior angles acute and directed forward; lateral borders of fore lobe almost straight, divergent backward; lateral (interlobal) notch widely rounded; fore disc convex, with small pit in middle of median line. Interlobal depression sharply marked. Anterolateral borders of hind lobe convex; lateral angles terminating with small tooth; posterolateral borders undulating, convex, then concave; posterior angles rounded, not produced; posterior border slightly convex in middle. Pronotal carinae strong at base, tapering backward, evanescent at middle of hind disc, diverging backward, and roughly granulate at base. Hind disc strongly depressed along median line and near lateral angles; roughly punctate on inflated part and roughly rugose on depressed areas near lateral angles.

Scutellum triangular, more than one and a half times as long as wide at base (65/39), with acute apex almost reaching hind border of tergum V, lateral borders straight, reflexed, almost rimmed; disc depressed and finely punctate.

Hemelytra reaching over middle of tergum VII (male); apex of corium slightly passing apex of scutellum; disc of corium finely punctate



FIGS. 1-7. *Oxythyreus ruckesi*, new species, male. 1. Head, lateral view. 2. Antenna, dorsal view. 3. Forewing. 4. Lateral border of abdomen, dorsal view. 5. Tip of abdomen, ventral view. 6, 7. Right paramere, two views.

FIG. 8. *Agreuocoris nasalis* Maa and Lin, male forewing.

FIGS. 9, 10. *Bakerinia granulata*, new genus and new species, male. 9. Head, lateral view. 10. Right paramere.

between veins. Membrane with one closed cell formed by *Cu* and *PCu*.

Abdomen longer than wide (133/114), cordate, with slightly raised and deeply excavated apex. Lateral borders strongly convex at sides, then shallowly emarginate at posterior half; connexivum broad, but obscurely separated from tergum, almost fused with it; connexiva II to VI completely, and terga II to VI partially, exposed; connexivum VII partially covered by wings. Venter convex in middle, shallowly depressed at sides. Sterna IV to VI with small, subtriangular depression on median line. Hypopygium moderately large. Parameres of primary type, with single apical branch bent obliquely sideways.

Prosternal stridulatory groove small, narrow, and very deep; mesosternal cross, formed by longitudinal and transverse carinae, moderately high, with fore branch low and smooth.

Fore coxae long, but much shorter than fore femora (31/46); fore femora long and narrow (46/17), covered with semi-obliterated granulations.

COLOR: Head black, with reddish brown eyes; infraocular depression brown; inferior border of bucculae and rostral groove yellow; antennae black. Fore disc of pronotum ferruginous, blackened anteriorly; hind disc ochraceous, ferruginous laterally. Scutellum orange, with base and lateral borders blackened. Corium of hemelytra mahogany-red, membrane brown. Exposed parts of connexivum and tergum orange to reddish; apex of abdomen reddish brown, with pale median line. Venter orange to yellow, middle reddish, and apex reddish brown. Pleura reddish brown, yellow inferiorly. Legs orange.

Total length, 12.2 mm.; width of pronotum, 4.0 mm.; width of abdomen, 5.7 mm.

HOLOTYPE: Male, South Africa (De Vyllder); deposited in the American Museum of Natural History.

It is a pleasure to name this striking species in honor of Dr. Herbert Ruckes.

*Oxythyreus ruckesi*, new species, is allied to the genotypic species, *Oxythyreus cylindricornis* Westwood, 1843, known from a single female specimen, but differs from it as follows: second and third antennal segments not "pear-shaped," second globose, and third button-shaped, much shorter than wide; anterolateral borders of hind lobe of pronotum convex; tips of lateral angles of same dentiform, directed sideways and a little backward; abdomen cordate, not fusiform (sexual character?), with deeply excavated tip, produced far beyond tips of wings and elevated.



*AMBLYTHYREUS* WESTWOOD

*Macrocephalus* (*Amblythyreus*) WESTWOOD, 1843, Trans. Ent. Soc. London, vol. 3, p. 30. Logotype: *M. (A.) rhombiventris* Westwood, 1843.

*Mecodactylus* FIEBER, 1861, Die europäischen Hemiptera, p. 34, *sine* species.

*Amblythyreus* HANDLIRSCH, 1897, Ann. Naturhist. Hofmus., Vienna, vol. 12, pp. 143, 209.

*Amblythyreus*, BIANCHI, 1899, Ann. Mus. Zool., St. Petersburg, vol. 4, p. 223.

*Paramblythyreus* BIANCHI, 1899, Ann. Mus. Zool., St. Petersburg, vol. 4, p. 224.

*Amblythyreus*, DISTANT, 1903, Fauna of British India, Rhynchota, vol. 2, p. 164.

*Amblythyreus*, MAA AND LIN, 1956, Quart. Jour. Taiwan Mus., vol. 9, p. 125.

This is the largest Oriental genus in the subfamily, with 14 species distributed from Iran to the Philippines and Taiwan. In the lot from the United States National Museum there is one male specimen of *Amblythyreus potaninae* (Bianchi), 1899. This species was based on a single female. Below is a description of the first known male.

*Amblythyreus potaninae* (Bianchi)

*Paramblythyreus potaninae* BIANCHI, 1899, Ann. Mus. Zool., St. Petersburg, vol. 4, p. 226.

*Amblythyreus potaninae* MAA AND LIN, 1956, Quart. Jour. Taiwan Mus., vol. 9, p. 126.

MALE: Similar to female, but narrower; fourth antennal segment longer (sexual character); anterolateral borders of pronotum straight, slightly convergent posteriorly; lateral (interlobal) notch absent; lateral angles pointed and slightly raised; anterolateral and posterolateral borders of pronotum together forming right angle; abdomen relatively narrower; hypopygium rather small.

MEASUREMENTS: Head longer than wide through eyes (35/22); proportions of antennal segments: 15(4)/8(3)/14(3)/30(7). Pronotum shorter than wide (47/85); scutellum longer than wide (45/39); abdomen shorter than wide (110/117); hypopygium longer than wide (25/22); fore femora very long, three times as long as wide (48/15).

COLOR: Head from above, fore disc of pronotum, basal semilunar elevation of scutellum, transverse band of abdomen, spot on connexivum VII, and tergum all black; posterior disc of pronotum, corium of hemelytra, and head, laterally, all reddish brown; anterolateral borders of pronotum, remainder of connexiva from above, and entire ventral surface of body pale ochraceous to brownish; antennae brownish; membrane brown; disc of scutellum ivory, with exception of semilunar spot.

Total length, 10.0 mm.; width of pronotum, 4.25 mm.; width of abdomen, 5.85 mm.

NEOALLOTYPE: Male, west China, Szechwan, Suifu, June 1925 (D. C. Graham); deposited in the United States National Museum.

Bianchi made a small error in his description. He took both the prosternum and the mesosternum together to be the prosternum, and the metasternum to be the mesosternum. Thus he could not find the metasternum.

#### AGREUOCORIS HANDLIRSCH

*Agreuocoris* HANDLIRSCH, 1897, Ann. Naturhist. Hofmus., Vienna, vol. 12, p. 217. Haplotype: *A. nouahlieri* Handlirsch, 1897.

*Agrenocoris*, BIANCHI, 1899, Ann. Mus. Zool., St. Petersburg, vol. 4, p. 223.

*Agreuocoris*, MAA AND LIN, 1956, Quart. Jour. Taiwan Mus., vol. 9, p. 132.

This genus has three species. The first, *Agreuocoris nouahlieri* Handlirsch, is labeled "Mexico," but Handlirsch doubted if the genus could be American, since it has many characters of the Oriental Macrocephalinae. The fact that the second species is found in the Himalaya and the third in India confirms the Oriental range of the genus.

#### *Agreuocoris nasalis* Maa and Lin

##### Figure 8

*Agreuocoris nasalis* MAA AND LIN, 1959, Pacific Insects, Bernice P. Bishop Mus., vol. 1, p. 318.

The venation of the forewing is an important character for the separation of *Agreuocoris* from a new genus, *Bakerinia*, described elsewhere in this paper. In *Agreuocoris* the veins of the membrane form two closed cells, made by *M* and *Cu*, and *Cu* and *PCu*, respectively. Maa and Lin forgot to mention that the type of *A. nasalis* is deposited in the present author's collection.

#### PARAGREUOCORIS CARAYON

*Paragreuocoris* CARAYON, 1949, Bull. Soc. Ent. France, vol. 54, p. 6. Orthotype: *P. nimbanus* Carayon, 1949.

*Paragreuocoris*, MAA AND LIN, 1956, Quart. Jour. Taiwan Mus., vol. 9, p. 133.

This genus has two species: *P. nimbanus* Carayon, 1949, and *P. aethiopicus* Carayon, 1949, both collected at Keoulenta, near Mt. Nimba, Guinea. *Paragreuocoris aethiopicus* was also found at Lake Tchad, in the area formerly called French Equatorial Africa. The American Museum has three males and four females of *P. aethiopicus* from Faraje, near the eastern border of the Congo (former Belgian Congo), and the present author's collection contains one female, identified by J. Carayon

as "*P. aethiopicus*, var.?", from the eastern Congo, near Lake Kivu. Compared with Carayon's description, all these specimens show certain small differences in the measurements and proportions of the antennal segments. Because Carayon's descriptions are too brief, it is impossible to decide whether the specimens represent a separate geographical subspecies. At any rate, it is surprising that this species has such a vast distribution, from Mt. Nimba in Guinea to Lake Kivu in the eastern Congo.

*Paragreuocoris aethiopicus* Carayon

*Paragreuocoris aethiopicus* CARAYON, 1949, Bull. Soc. Ent. France, vol. 54, p. 8.

*Paragreuocoris aethiopicus*, MAA AND LIN, 1956, Quart. Jour. Taiwan Mus., vol. 9, p. 133.

All the specimens mentioned under the generic heading show rather variable color, the males being black and yellow, or black and orange, with a faint rosy tinge. The females are yellow and orange, but some have a rather pronounced rosy tinge on the scutellum. The female from Lake Kivu is a little larger, with slightly different measurements. Its color is orange, with the hind lobe of the pronotum and the entire scutellum being mahogany brown.

In the following measurements the female in the American Museum is marked as *a*, and the female from Lake Kivu as *b*.

HEAD: Longer than wide through eyes, male, 40/17, female *a*, 40/17.5, female *b*, 40/17.5; proportions of antennal segments: male, 12.5(5)/5(4)/3.5(3)/30(5), female *a*, 14(5)/5(4)/3.5(2.5)/16(5), female *b*, 13(5)/6(4)/3.5(2.5)/17(5). Pronotum shorter than wide, male, 46/50, female *a*, 50/52, female *b*, 52/58; scutellum almost without constriction, three times as long as wide, male, 90/31, female *a*, 112/32, female *b*, 115/36; abdomen longer than wide, male, 90/65, female *a*, 105/73, female *b*, 110/76; fore femur, male, 38/14, female *a*, 43/15, female *b*, 43/15. Hypopygium of male rather small, longer than wide, 16/15; genital segments of female shorter than wide, female *a*, 17/24, female *b*, 17/24.

Total length, male, 9.5 mm., female *a*, 10.6, female *b*, 10.65 mm.; width of pronotum, male, 2.5 mm., female *a*, 2.6, female *b*, 2.9 mm.; width of abdomen, male, 3.25 mm., female *a*, 3.65, female *b*, 3.8 mm.

Three males and four females, Congo, Faraje, longitude 29° 40' E., latitude 3° 40' N.; January 1913 (Lang and Chapin); deposited in the American Museum of Natural History.

One female, Congo, Lake Kivu, Kadjuju, 1932 (G. Babault); in collection of author.



**BAKERINIA**, NEW GENUS

## Figures 9–16

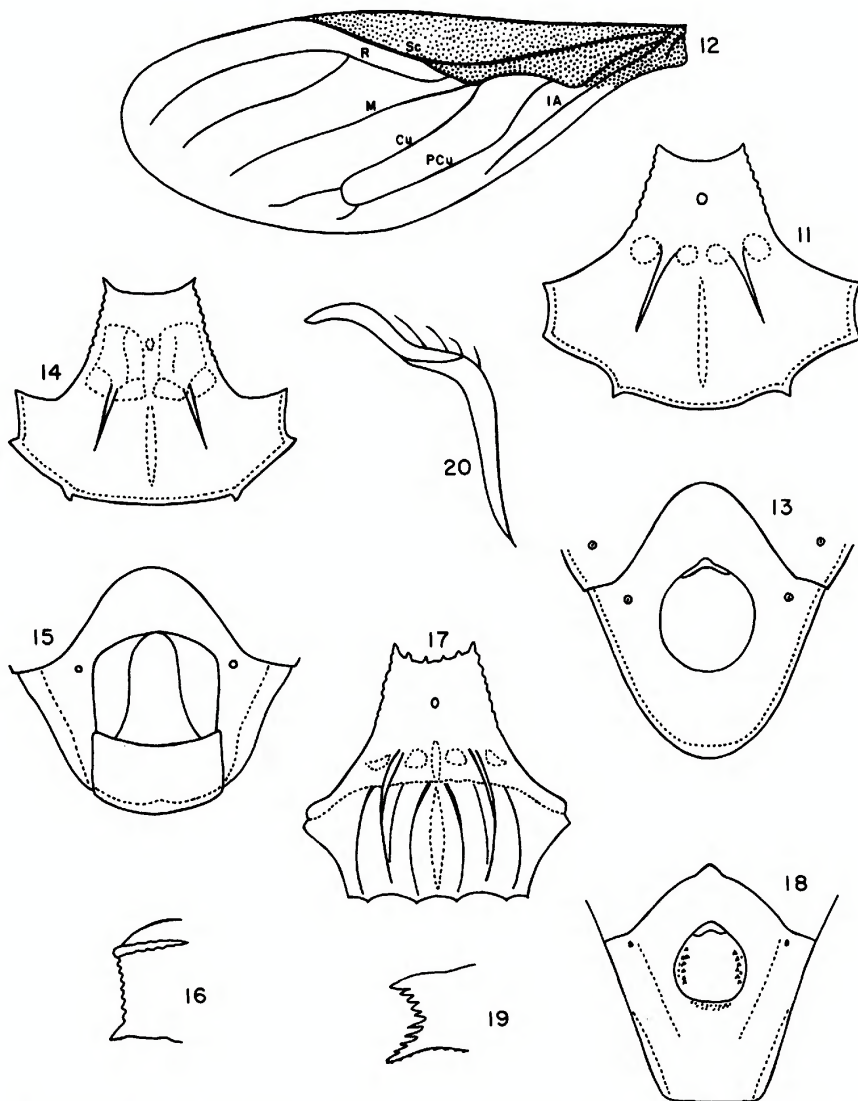
Head long, almost two and a half times as long as wide through eyes; its cross section subtriangular; sides subparallel; preocular portion slightly shorter than postocular. Eyes large but rather flat; ocelli placed on small swellings, equidistant from eyes and hind border of head. Tylus thin, with row of fine granules. Juga large, enveloping base of antennae from sides; from lateral aspect juga rounded anteriorly and slightly produced beyond tip of genae. Genae moderately long, almost straight anteriorly, slightly reflexed and feebly depressed longitudinally for reception of antennae. Bucculae long, forming a rather narrow rostral groove. Antennae moderately long, only slightly longer than head. First segment robust, obliquely truncate anteriorly; remainder of segments retractile: second and third small and subpyriform; second half as long, and third one-third as long, as first; fourth (male) more than twice as long as the first and elongately fusiform. Rostrum strong; first (visible) segment robust and long, second slightly thinner and shorter, third short and thin, half as long as second.

Pronotum much shorter than wide, divided into two lobes; fore lobe almost trapezoidal, shorter than wide at base; anterior border deeply and roundly excavated; anterior angles acute; lateral borders almost straight and divergent backward; disc strongly inflated, provided with elongate pit in middle of median line; hind lobe longer and much wider than fore lobe, almost octagonal in shape; anterolateral borders of hind lobe feebly undulating; lateral angles truncate, forming four (2+2) separate angles, with margin between them slightly excavated; posterior disc depressed on median line. Pronotal carinae robust at base, tapering backward, and divergent, extending only to middle of disc.

Scutellum large, tongue-shaped, almost reaching tip of abdomen; lateral borders constricted near base, then convex; apex rounded. Base of disc triangularly inflated, then depressed at both sides of median carina; latter slightly widened at base, becoming thin and low and extending three-fourths of length of scutellum. Disc punctured, more roughly at base, and marked with scattered granules.

Hemelytra reaching tip of abdomen; whole membrane and part of corium covered by scutellum; membrane having only one closed cell, formed by *Cu* and *PCu*.

Abdomen cordate, shorter than wide, widest part between segments II and III. Connexiva indistinctly separated from tergum and from each other, almost fused into one plate. Venter inflated in middle, with sterna



FIGS. 11-13. *Bakerinia granulata*, new genus and new species, male. 11. Pronotum. 12. Forewing. 13. Tip of abdomen, ventral view.

FIGS. 14-16. *Bakerinia acutangula*, new genus and new species, female. 14. Pronotum. 15. Tip of abdomen, ventral view. 16. Fore border of propleuron.

FIGS. 17-20. *Diurocoris truncatus*, new species, male. 17. Pronotum. 18. Tip of abdomen, ventral view. 19. Fore border of propleuron. 20. Right paramere.

sharply separated one from another; sterna II to IV produced in middle in form of acute angle, each inserted into posterior border of preceding segment; sternum V only slightly produced, and sternum VI rounded anteriorly.

Fore border of propleura straight, with only antero-inferior angle produced forward, and a little downward, as a blunt tooth. (In *Agreuocoris*, fore border of propleura deeply and roundly excavated.)

Prosternum short, with narrow and deep stridulatory groove; mesosternum long, with moderately raised, long, smooth, mesosternal cross.

Fore coxae subcylindrical, long, smooth, and completely unarmed; fore femora relatively large, slightly shorter than head, more than twice as long as wide; femoral discs slightly inflated, but smooth, without either granulation or punctures. Fore tibiae also smooth. Fore tarsi missing; middle and hind tarsi very long, as long as corresponding tibiae.

TYPE SPECIES: *Bakerinia granulata*, new species.

This genus is named in honor of the memory of Mr. C. F. Baker, who collected both species of the new genus.

*Bakerinia* is rather closely allied to the genus *Agreuocoris* Handlirsch, 1897, but can be separated from it by the following characters: rather short genae, not produced beyond tip of juga, almost straight anteriorly; different venation of forewings, membrane with only one closed cell; and straight fore border of propleuron, with upper tooth absent, and lower tooth directed more downward.

### ***Bakerinia granulata*, new species**

#### Figures 9–13

MALE: Entire surface of head, from above and laterally, fore lobe of pronotum, excepting four (2+2) smooth spots mesad and laterad of base of pronotal carinae, and fore lobe of propleura covered with very dense, rounded granulation, similar to cobblestone pavement.

Length of head two and a half times width through eyes (52/21); proportions of antennal segments: 14(6)/7(3.5)/5(3)/35(8). Proportions of rostral segments: 25(7)/15(6)/8(2.5).

Pronotum much shorter on median line than wide across humeri (54/75); fore lobe much narrower than hind lobe (34/75) and trapezoidal; hind lobe suboctagonal: lateral angles truncate, forming four (2+2) angles; anterior angles right angles, posterior subobtus, margin between them slightly excavated; hind disc covered with dispersed punctures and depressed and smooth between carinae.

Scutellum more than twice as long as wide (101/48), constricted at first third, minimal width 37 units.

Abdomen shorter than wide (88/100), widest part between segments II and III. Postero-exterior angles of connexiva II and III slightly produced, all others not produced. Hypopygium as long as wide (25/25).

Fore femora more than twice as long as wide (48/21).

Head, pronotum, scutellum, and hemelytra yellow-brown mottled with testaceous and reddish brown, true color being partly obscured by light granulation. Upper surface of abdomen and legs yellow; pleura and venter yellow, mottled with reddish brown and pink-red.

Total length, 10.65 mm.; width of pronotum, 3.75 mm.; width of abdomen, 5.0 mm.

HOLOTYPE: Male, the Philippines, Mindanao, Surigan, no date (Baker); deposited in the United States National Museum.

### ***Bakerinia acutangula*, new species**

Figures 14–16

FEMALE: Similar in general to that of *Bakerinia granulata*, new species, but granulation smaller and not so dense, particularly on fore lobe of pronotum, where it is rather sparse and widely scattered. Head more cylindrical and relatively shorter; ocelli not placed on inflations. Pronotum relatively narrower, with anterior angles more pointed; anterior angles of truncate lateral angles more developed, pointed, and directed more forward and slightly upward; width across equal to width across hind pair of angles. Scutellum same shape, but widened basal part of scutellar carina relatively longer, occupying one-fifth of length of scutellum. Abdomen more angulate laterally; connexiva on dorsal surface distinctly separated from each other, and feebly but more distinctly separated from tergum than in *B. granulata*. Venter very rough, though rather sparsely granulated. Fore coxae smooth, but all femora sparsely and intermittently granulated.

MEASUREMENTS: Head longer than wide (45/21); proportions of antennal segments: 12(6)/7(4)/5(2.5)/17(5.5). Antennae much shorter and more slender than in *B. granulata* (female, sexual character). Proportions of rostral segments: 25(7)/12.5(5)/8(3). Pronotum shorter than wide (50/66); fore lobe shorter than wide at base (21/32); hind lobe also shorter than wide across humeri (29/66). Scutellum longer than wide (101/43), narrowest part 33 units wide. Abdomen much shorter than wide (88/108); widest part between segments II and III. Fore femora longer than wide (46/20).

COLOR: Pale testaceous; tip of head, first two antennal segments, and lateral angles of pronotum slightly darker, reddish brown to chestnut brown; metapleura, middle of venter, and femora with reddish tinge.

Total length, 10.1 mm.; width of pronotum, 3.3 mm.; width of abdomen, 5.4 mm.

HOLOTYPE: Female, the Philippines, Benguet, Baguio, no date (Baker); deposited in the United States National Museum.

*DIUROCORIS* MAA AND LIN

*Diurocoris* MAA AND LIN, 1956, Quart. Jour. Taiwan Mus., vol. 9, p. 134.

This genus had previously only one species, *Diurocoris nakabayashii* (Sonan), 1937, described from Taiwan (Formosa), and found also in Fukien, China. The second species, from Assam, India, is described below.

***Diurocoris truncatus*, new species**

Figures 17-20

MALE: Elongate, three times as long as wide across abdomen; abdomen truncate posteriorly.

Head more than twice as long as wide (42/18), with almost parallel sides; preocular portion as long as postocular (15.5/15.5); tylus thin and short, with row of small granules; juga long and strong, notch between them very deep. Ocelli dorsolateral, equidistant from eyes and posterior border of head. Genae very long, rounded anteriorly, with slightly reflexed borders, produced far beyond tip of juga. Antennal groove shallow, but clearly marked below and behind eyes. First antennal segment robust, almost square in cross section, rounded anteriorly, and produced roof-like above base of segment II; segment II small, pyriform, placed subapically; segment III the smallest, and globose; segment IV robust, cylindrical, pointed apically. Proportions of antennal segments: 18(5)/6(4.5)/3(3)/-34(5.5). Rostrum robust; proportions of rostral segments: 23(5.5)/9(5)/-5.5(2.5).

Pronotum hexagonal, shorter than wide across humeri (54/60); anterior border deeply and roundly excavated and provided with four (2+2) small, blunt teeth. Anterior angles pointed and directed forward; anterolateral borders concave, roughly granulate anteriorly, with smaller granules posteriorly. Lateral angles slightly indented. Posterolateral borders also concave; posterior border convex in middle, roundly emarginate laterally. Fore lobe of pronotum shorter than wide at base (22/30), strongly inflated. Fore disc relatively finely granulate laterally, almost without granulation in middle. Hind lobe half as long as wide



across humeri (30/60), divided into two areas by arcuate line, running between humeri, with its convex side forward; before this line, hind disc densely granulate, resembling cobblestone pavement; behind line, roughly punctured. Pronotal carinae robust at base, tapering backward, evanescent near middle of disc. Besides pronotal carinae, six (3+3) more thin, longitudinal carinae parallel, or subparallel, with pronotal carinae two laterad and four mesad. Hind area of hind disc depressed on median line and along posterolateral borders.

Scutellum tongue-shaped, more than three times as long as wide at base (123/38); median carina thin, but clearly visible to apex, with base inflated (one-tenth of length) and covered with rough granulation, posterior portion smooth. Lateral borders carinate from base to middle of scutellum. Along lateral borders two (1+1) very fine carinae, separated from border by row of large, almost cell-shaped punctures. Similar punctures also on basal half of disc forming mesh; apical half with much finer punctures.

Hemelytra extending backward as far as scutellum, and partially covered by it; corium very long, reaching to apical border of connexivum V (IV visible), and finely punctured between veins.

Abdomen lanceolate in shape, posteriorly truncate; much longer than wide (110/72), widest across segment III. Lateral borders convex, rounded, and granulate on segments II to IV, then straight. Connexiva II to V visible from above, VI and VII partially covered by wings; connexiva II to V subequal in length, VI slightly longer, VII (male) two and a half times as long as II, twice as long as VI. Discs of connexiva granulate.

Propleura finely granulate; fore borders roundly and deeply excavated, armed with strong blunt teeth. Antero-superior and antero-inferior angles acute and produced forward, almost dentiform.

Prosternum short, with deep and narrow stridulatory groove. Mesosternum very long, mesosternal cross thin and smooth, rather low, raised only posteriorly near crossing.

Venter densely granulate. Hypopygium relatively small, longer than wide (23/16); parameres with hook.

Fore femora small, longer than wide (45/15).

COLOR: Ochraceous; head, pronotum, corium, scutellum, and first three antennal segments red-brown to testaceous; granulation pale ochraceous; membrane brown; connexiva III to VI each with dark brown dot in antero-interior angle.

Total length, 11.0 mm.; width of pronotum, 3.0 mm.; width of abdomen, 3.6 mm.

HOLOTYPE: Male, India, Assam, Chabua, April 14, 1943 (D. E. Hardy); deposited in the United States National Museum.

*Diurocoris truncatus*, new species, can be easily separated from *D. nakabayashii* (Sonan) by the posteriorly truncate abdomen of the former.

*GLOSSOPELTA* HANDLIRSCH

*Glossopelta* HANDLIRSCH, 1897, Ann. Naturhist. Hofmus., Vienna, vol. 12, p. 215.

*Glossopelta*, BIANCHI, 1899, Ann. Mus. Zool., St. Petersburg, vol. 4, p. 223.

*Glossopelta*, DISTANT, 1903, Fauna of British India, Rhyncota, vol. 2, p. 150.

*Glossopelta*, MAA AND LIN, 1956, Quart. Jour. Taiwan Mus., vol. 9, p. 137.

*Glossopelta tridens* Maa and Lin

*Glossopelta tridens* MAA AND LIN, 1956, Quart. Jour. Taiwan Mus., vol. 9, p. 142.

This species was described by Maa and Lin on the basis of two males from Fukien, China, females being unknown. In the collection of the United States National Museum there are a male and a female, also from China. Below is a brief description of the female.

FEMALE: Similar to male, but larger, with wider abdomen. Color lighter: head and fore lobe of pronotum dark orange (dark brown in male); hind lobe of pronotum light brown, whitish brown laterally (in male brown and ocher-brown, respectively). Scutellum, hemelytra, and abdomen same color in both sexes: brown, mottled with whitish dark brown and orange.

MEASUREMENTS: Head longer than wide (44/22); proportions of antennal segments: 14(5.5)/10(3)/10.5(2.5)/20(5); pronotum shorter than wide (60/70); fore lobe narrower at base than hind lobe across humeri (29/70); scutellum much longer than wide (118/51), its narrowest portion 36 units wide; abdomen longer than wide (108/100); fore femur longer than wide (42/17).

Total length, 11.1 mm.; width of pronotum, 3.5 mm.; width of abdomen, 5.0 mm.

NEALLOTYPE: Female, China, Datchulan, 1939 (T. H. Cheng); deposited in the United States National Museum.

